Listing of Claims

Claims 1-25 (previously canceled).

26. (currently amended) ~~A method of making a custom orthodontic appliance comprising the steps of:~~

The method of claim ~~26~~ 32 wherein the forming of the ~~custom orthodontic appliance by stereo lithography~~ object includes includes:

producing three-dimensional digital data defining shapes of the crowns of a plurality of the teeth of a patient;

by a jet printing method and in response to the three-dimensional digital data, directly or indirectly forming a custom orthodontic appliance having at least one three-dimensional surface thereof that is configured to matingly conform to at least a portion of the crown of a tooth of the patient.

27. (currently amended) The method of claim ~~26~~ 32 wherein the forming of the ~~custom orthodontic appliance by stereo lithography~~ object includes includes:

forming, by stereo lithography responsive to the three-dimensional digital data, an intermediate object having at least one surface defined by the shape of at least a portion of at least one of the crowns of the teeth of the patient; and

performing a molding process using the intermediate object to form a custom orthodontic appliance having at least one three-dimensional surface thereof that is configured to matingly conform to at least a portion of the crown of a tooth of the patient

28. (original) The method of claim 27 wherein:

the forming of the intermediate object includes forming the intermediate object having a plurality of surfaces each defined by the shape of at least a portion of a different one of the crowns of the teeth of the patient; and

the performing of the molding process includes forming the appliance having a plurality of three-dimensional surfaces thereof configured to matingly conform each to at least a portion of the crown of a different one of the plurality of the teeth of the patient.

29. (original) The method of claim **28** wherein:

the forming of the intermediate object includes forming a pattern of a plurality of brackets of the orthodontic appliance and using the pattern to make a mold thereof; and

the performing of the molding process includes investment casting a plurality of orthodontic brackets in the mold, each bracket having a three-dimensional surface thereon configured to matingly conform to at least a portion of the crown of one of the teeth of the patient.

30. (currently amended) The method of claim ~~**26**~~ **32** wherein the forming of the custom orthodontic appliance by stereo lithography includes directly producing an orthodontic bracket by depositing by stereo lithography material from which the bracket is made in the shape of an orthodontic bracket having at least one three-dimensional surface thereof that is configured to matingly conform to at least a portion of the crown of a tooth of the patient.

31. (currently amended) Straightening the teeth of a patient with an orthodontic appliance made by the method of claim ~~**26**~~ **32** and further comprising the steps of:

installing the custom orthodontic appliance on the teeth of the patient with the said surface matingly conforming to said portion of the crown of the tooth of the patient; and

through forces exerted on the tooth through the matingly conforming surface, moving the tooth in the mouth of the patient.

32. (original) A method of directly or indirectly manufacturing an orthodontic appliance comprising:

producing digital data defining a three dimensional surface of an orthodontic appliance;

depositing material, in accordance with the digital data, layer by layer in a plurality of layers each constituting a two dimensional cross-section of a solid object having an edge defined by data of the three dimensional surface, the layers being stacked in a third dimension to form the solid object having a three dimensional surface defined by the data.

33. (original) The method of claim **32** further comprising:

the solid object having the three dimensional surface is an orthodontic appliance having a surface defined by the three dimensional surface of the object.

34. (original) The method of claim **32** further comprising:

using the solid object having the three dimensional surface to indirectly shape an orthodontic appliance having a surface defined by the three dimensional surface of the object.

35. (original) The method of claim **34** wherein:

the solid object is a pattern having said shape and the manufacturing further includes forming a mold with the use of the pattern and casting the orthodontic appliance or component thereof therein.

36. (original) The method of claim **32** wherein:

the material is selectively formed in each layer of a first portion of material that is removable chemically, thermally or mechanically, and a second portion that remains after removal of the first portion to form a solid object the shape of a custom orthodontic appliance or component thereof.

37. (original) The method of claim **35** wherein:

the material is wax of two types, one forming said first portion and one forming said second portion, and the deposition thereof to selectively form the layers includes the selective jet printing of the layers to define a cross section of the object with said second portion forming the pattern and being surrounded by a removable medium formed of said first portion.

38. (original) A method of manufacturing an orthodontic appliance comprising:

defining three-dimensional digital data of a custom orthodontic appliance;

providing bases for a plurality of brackets of a set on an integral sheet of base material, each base having a curvature approximately corresponding to the three dimensional shape of at least a portion of a crown of a tooth;

attaching an archwire support blank to each of the bases on the integral sheet; and

cutting archwire slots in each of the archwire supports by supporting the sheet and moving a cutting tool relative thereto.

39. (original) The method of claim **38** further comprising:

separating each of the bases from the sheet.

40. (original) A method of manufacturing an orthodontic appliance comprising:

defining three-dimensional digital data of a custom orthodontic appliance;

forming, in response to the data, in a shaping element a dental anatomical or orthodontic appliance shape; and

forming the an orthodontic appliance or appliance accessory to the shape with the shaping element.

41. (original) The method of claim **40** wherein:

the forming of the shape includes forming a curve in the shaping element in the shape of an archwire; and

the forming of the appliance or appliance accessory to the shape includes placing a wire length in the cut curve and annealing the wire while held by the form to impart to the wire the shape of the cut curve.

Claims **42-48** (previously canceled).

49. (previously added) Straightening the teeth of a patient with an orthodontic appliance made by the method of claim **27** and further comprising the steps of:

installing the custom orthodontic appliance on the teeth of the patient with the said surface matingly conforming to said portion of the crown of the tooth of the patient; and

through forces exerted on the tooth through the matingly conforming surface, moving the tooth in the mouth of the patient.

50. (previously added) Straightening the teeth of a patient with an orthodontic appliance made by the method of claim **28** and further comprising the steps of:

installing the custom orthodontic appliance on the teeth of the patient with the said surface matingly conforming to said portion of the crown of the tooth of the patient; and

through forces exerted on the tooth through the matingly conforming surface, moving the tooth in the mouth of the patient.

51. (previously added) Straightening the teeth of a patient with an orthodontic appliance made by the method of claim **29** and further comprising the steps of:

installing the custom orthodontic appliance on the teeth of the patient with the said surface matingly conforming to said portion of the crown of the tooth of the patient; and

through forces exerted on the tooth through the matingly conforming surface, moving the tooth in the mouth of the patient.

52. (previously added) Straightening the teeth of a patient with an orthodontic appliance made by the method of claim **30** and further comprising the steps of:

installing the custom orthodontic appliance on the teeth of the patient with the said surface matingly conforming to said portion of the crown of the tooth of the patient; and

through forces exerted on the tooth through the matingly conforming surface, moving the tooth in the mouth of the patient.